

Claims:

5

1. Method for use in a first node (10) of a communication network for managing the transfer of information in packets (T) across a channel (100) from a second node (20), including
holding a queue record (11) representing the number of packets
awaiting transmission at said second node (20),
updating said queue record (11) upon receipt of a queue size value (Rn) from said second node,
characterised by
recording the issue of permits (TP) allocating time slots on said channel (100) destined for said second node (20) for a predetermined time period after the issue of each permit (TP) and adjusting any queue size value (Rn) received from said second node (20) by the number of recorded permits prior to updating said queue record (11).
2. Method as claimed in claim 1, **characterised in that** said time period is a predetermined time period.
3. Method as claimed in claim 1 or 2, **characterised in that** said time period is equivalent to the round-trip transmission delay between said first and second nodes (10, 20).
4. Method as claimed in any one of claims 1 to 3, **characterised in that** said time period is equivalent to the delay between the first node (10) sending a permit and the second node (20) receiving said permit plus

the delay between the second node (20) sending a packet in response to the permit and the first node (10) receiving said packet

5 5. Method as claimed in claim 4, characterised in that said delay includes a processing delay for the second node (20) and for said first node (10).

 6. Method as claimed in any one of claims 1 to 5, **characterised by** sending at least one permit when said recorded queue size (11) is greater than zero.

10

 7. Use of the method of any one of claims 1 to 6 in a central node (10) of a point-to-multipoint communication network.

 8. A node (10) of a communication network adapted to receive
15 information in packets from at least one further node (20), including means (11) for storing a queue record representing the number of packets awaiting transmission at said at least one further node (20), and means for updating said queue record (11) upon receipt of a queue size value (R_n) from said at least one further node, **characterised by**
20 means (12) for recording the issue of permits (TP) to said at least one further node (20) for a predetermined time period, whereby each permit enables the transfer of at least one packet of information, and for adjusting any incoming queue size value (R_n) received from said at least one further node (20) on the basis of said recorded permit value.

25

 9. A node as claimed in claim 8, **characterised by** said means for updating said queue record (11) is arranged to utilise an adjusted queue size value (R_n).

10. A node as claimed in claim 8 or 9, **characterised in that** said delay is equivalent to the round trip delay between said node (10) and said further node (20).
- 5
11. A node as claimed in any one of claims 8 to 10, **characterised in that** said delay is equivalent to the sum of the time period between transmission of a permit (TP) and receipt of said permit by the further node (20) and the time period between transmission of a packet of information (T) by said further node (20) in response to said permit (TP) and receipt of said packet by the node (10).
- 10
12. A communication network including a central node (10) and several multipoint nodes (20), the multipoint nodes being connected to said central node by a shared medium (100), wherein said central node includes means (11) for storing queue size records representing the number of packets awaiting transmission at each of said multipoint nodes (20), and
- 15
- means for updating each of said queue records (11) upon receipt of a queue size value (R_n) from a respective one of said multipoint nodes (20), **characterised by**
- 20
- means (12) for recording the issue of permits (TP) enabling the transfer of at least one packet of information to each of said multipoint nodes (20) for a predetermined delay, and for adjusting any incoming queue size value (R_n) received from said multipoint nodes (20) on the basis of
- 25
- a respective recorded permit value.
13. A network as claimed in claim 12, **characterised by** said means for

updating said queue records (11) is arranged to utilise an adjusted corresponding queue size value (R_n).

- 5 14. A network as claimed in claim 13 or 14, **characterised in that** said delay is equivalent to the sum of the time period between transmission of a permit and receipt of said permit by the corresponding multipoint node (20) and the delay between the transmission of a packet by said multipoint node (20) and receipt of said packet by said central node (10).

10

05250-0459360